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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,052	10/04/2005	Siebe Tjerk De Zwart	NL 030359	6171
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EXAMINER MANDEVILLE, JASON M				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/552,052

**Applicant(s)**

DE ZWART ET AL.

**Examiner**

JASON M. MANDEVILLE

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "(AD; LA)" and "(AD)" have both been used to designate the optical addressing means. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "AD" has been used to designate both the optical addressing means and the matrix display. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Zehner et al. (hereinafter "Zehner" US 2003 / 0011868).

7. As pertaining to **Claim 1**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1), a display (70) for displaying and storing images (see Page 1, Para. [0003], [0008], and [0010] as well as Page 4, Para. [0048]-[0050] and Page 8, Para. [0081]-[0084]), and comprising:

an optically addressable electrophoretic display (PD; i.e., see (70)) with a stack of a photoconductive layer (PCF; see (12)) and an electrophoretic layer (EF; see (14)) being sandwiched between electrodes (E1, E2; see (110, 120); see Page 8, Para. [0085]-[0086]),

an optical addressing means (AD; LA; see (100)) being optically coupled to the photoconductive layer (PCF; see (12)) for supplying addressing light (AL; see Page 9, Para. [0088]-[0089] in conjunction with Page 5, Para. [0057]-[0061] and Page 10, Para. [0097]-[0098]),

a driver (DR1; see (18, V)) for supplying a drive voltage (DV; see (V)) between the electrodes (E1, E2; see (110, 120); see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057]),

a controller (CO; implicit in (18); again, see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057]) for controlling:

the driver (DR1; see (18, V)) to supply the drive voltage (DV; see (V)) with a value enabling a change of the optical state of the electrophoretic layer (EF; see (14)) in response to an amount of the addressing light (AL) impinging on the photoconductive layer (PCF; see (12); again, see Page 9, Para. [0088]-[0089] in conjunction with Page 4

through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]),

the driver (DR1; see (18, V)) to change the drive voltage (DV; see (V)) to a value enabling a storage of the optical state of the electrophoretic layer (EF; see (14)) independent on the amount of addressing light (AL) impinging on the photoconductive layer (PCF; see (12); again, see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]), and

the optical addressing means (AD; see (100)) to minimize a power consumption of the optical addressing means (AD; see (100)) and/or the electrophoretic display (see (70); see Page 8, Para. [0085] and Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066]).

8. As pertaining to **Claim 2**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the optical addressing means (AD; see (100)) is attached to the optically addressable electrophoretic display (PD; see (70)) to form a single unit (see Fig. 10; also see Page 8 through Page 9, Para. [0085]-[0089]).

9. As pertaining to **Claim 3**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the optical addressing means (AD; see (100)) is a matrix display (AD) with pixels, the pixels generating the addressing light (AL) impinging on corresponding

cells of the photoconductive layer (PCF; see (12); also see Page 5, Para. [0057]-[0058] and Page 7, Para. [0077]).

10. As pertaining to **Claim 4**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the matrix display (AD) is a poly-led display (again, see Page 5, Para. [0057]-[0058]).

11. As pertaining to **Claim 5**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the controller (CO; implicit in (18)) is arranged for minimizing a power consumption of the optical addressing means (AD; see (100)) by switching off the optical addressing means (AD; see (100)); also see Page 8, Para. [0085] and Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066]).

12. As pertaining to **Claim 6**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the driver (DR1; see (18, V)) is switched off after the drive voltage (DV; see (V)) has been changed to a value enabling storage of the optical state of the electrophoretic layer (EL; see (14)); also see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]).



13. As pertaining to **Claim 7**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the electrophoretic layer (EF; see (14)) comprises microcapsules (MC; see Page 1, Para. [0003]-[0004] and [0008] as well as Page 4 through Page 5, Para. [0055]-[0056] and Page 8, Para. [0085]).

14. As pertaining to **Claim 8**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the microcapsules (MC) have a predetermined conductivity (see Page 4 through Page 5, Para. [0055]-[0056] and Page 8, Para. [0085]).

15. As pertaining to **Claim 9**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the electrophoretic layer (EF; see (14)) comprises a binder (RB) in-between the microcapsules (MC), the binder (RB) having a predetermined conductivity (see Page 10 through Page 11, Para. [0105] in conjunction with Page 4 through Page 5, Para. [0055]-[0056] and Page 8, Para. [0085]).

16. As pertaining to **Claim 10**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1) that the predetermined conductivity is selected to keep the voltage across the electrophoretic layer (EF; see (14)) low enough at dim surround light to prevent its optical state to change, while the voltage across the electrophoretic layer (EF; see (14)) is large enough to change the optical state when the addressing light (AL) impinges (see Page 8 through Page 9, Para. [0085]-[0089] in conjunction with

Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]).

17. As pertaining to **Claim 11**, Zehner discloses (see Fig. 10 in conjunction with Fig. 7 and Fig. 1), a method of displaying (see Page 1, Para. [0003], [0008], and [0010] as well as Page 4, Para. [0048]-[0050] and Page 8, Para. [0081]-[0084]) on an optically addressable electrophoretic display (PD; i.e., see (70)) with a stack of a photoconductive layer (PCF; see (12)) and an electrophoretic layer (EF; see (14)), the stack being sandwiched between electrodes (E1, E2; see (110, 120); see Page 8, Para. [0085]-[0086]), and an optical addressing means (AD; LA; see (100)) being optically coupled to the photoconductive layer (PCF; see (12)) for supplying addressing light (AL; see Page 9, Para. [0088]-[0089] in conjunction with Page 5, Para. [0057]-[0061] and Page 10, Para. [0097]-[0098]), the method comprising:

supplying a drive voltage (DV; see (V)) between the electrodes (E1, E2; see (110, 120); see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057]) with a value enabling a change of the optical state of the electrophoretic layer (EF; see (14)) in response to an amount of the addressing light (AL) impinging on the photoconductive layer (PCF; see (12); again, see Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]),

supplying the drive voltage (DV; see (V)) with a value enabling a storage of the optical state of the electrophoretic layer (EF; see (14); again, see Page 9,

Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066] and Page 7, Para. [0077]), and

controlling the addressing means (AD; see (100)) to minimize a power consumption of the optical addressing means (AD; see (100)) and/or the electrophoretic display (see (70); see Page 8, Para. [0085] and Page 9, Para. [0088]-[0089] in conjunction with Page 4 through Page 5, Para. [0055]-[0057] as well as Page 6, Para. [0066]).

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi et al. (US 7,019,722) discloses a display for displaying and storing images comprising optical addressing means, a driver, and a controller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. MANDEVILLE whose telephone number is 571-270-3136. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Mandeville  
Examiner  
Art Unit 2629

/J. M. M./  
Examiner, Art Unit 2629

/Amare Mengistu/  
Supervisory Patent Examiner, Art Unit 2629